



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Ex COMPONENT CERTIFICATE

Certificate No.: **IECEx SIQ 17.0003U** Page 1 of 4 Certificate history:
Status: **Current** Issue No: 2 [Issue 1 \(2021-05-20\)](#)
[Issue 0 \(2017-11-23\)](#)
Date of Issue: 2023-02-10
Applicant: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30, 74638 Waldenburg
Germany
Ex Component: Ammeter, types 8403/6 and 8405/6

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Increased safety "e", Encapsulation "m"**

Marking: Ex eb IIC Gb
Ex eb I Mb
or
Ex eb mb IIC Gb
Ex eb mb I Mb

Approved for issue on behalf of the IECEx
Certification Body:

Bojan Pečavar

Position:

Certification Manager

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

Slovenian Institute of Quality and Metrology (SIQ)
Masera-Spasicева ulica 10
SI-1000 Ljubljana
Slovenia





IECEX Certificate of Conformity

Certificate No.: **IECEX SIQ 17.0003U**

Page 2 of 4

Date of issue: 2023-02-10

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Manufacturer: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30, 74638 Waldenburg
Germany

Manufacturing locations: **ISKRA, d.o.o., PE MIS**
Ljubljanska cesta 24a
Kranj SI-4000
Slovenia

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The component and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-18:2017](#) Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the component listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[SI/SIQ/ExTR17.0006/00](#)

[SI/SIQ/ExTR17.0006/01](#)

Quality Assessment Report:

[DE/BVS/QAR10.0002/18](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX SIQ 17.0003U**

Page 3 of 4

Date of issue: 2023-02-10

Issue No: 2

Ex Component(s) covered by this certificate is described below:

Ammeter, types 8403/6 and 8405/6, is used for measurement and display of current values in hazardous area. It is intended for installation in appropriate enclosure with degree of ingress protection of at least IP54 according to IEC 60079-0. Moving-iron measuring elements are used as measuring system.

Manufacturer's instructions:

Ammeters 8403/6 (FQ0307) and 8405/6 (FQ0407), Certification Operating Instructions 8403 0 000 027 0 and 8405 0 000 026 0, Version: V2.0, R. STAHL Schaltgeräte GmbH, 10. 5. 2022

Technical details:

See Annex.

SCHEDULE OF LIMITATIONS:

Schedule of limitation:

- Ammeters must be completely installed in an enclosure with degree of ingress protection of at least IP54 according to IEC 60079-0.
- Creepage distances and clearances between the connection terminals and the enclosure parts must be kept according to IEC 60079-7, Table 2.
- Ammeters are suitable for following temperature classes within corresponding ambient temperature ranges at location of installation:
 - temperature class T4 ... -60°C or $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +70^{\circ}\text{C}$
 - temperature class T5 ... -60°C or $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +55^{\circ}\text{C}$
 - temperature class T6 ... -60°C or $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +40^{\circ}\text{C}$

Note: If additional suffix “(-40°C)” is added to the type reference on the marking label, then the Ammeters are suitable for minimum ambient temperature of -40°C, otherwise it is suitable for minimum ambient temperature of -60°C. For details see Operating instructions.



IECEX Certificate of Conformity

Certificate No.: **IECEX SIQ 17.0003U**

Page 4 of 4

Date of issue: 2023-02-10

Issue No: 2

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- New editions of standards were considered.
- Minimum service temperature was decreased from -40°C to -60°C for Ammeters with one of the used casting compounds.

Annex:

[Annex_to_IECEX_SIQ_17.0003U_issue_2_1.pdf](#)



Technical details:

Ammeter	Type: 8403/6	Type:8405/6
Rated current – measuring range	1 A – 0...2 A	
	1.5 A – 0...3 A	
	2.5 A – 0...5 A	
	4 A – 0...8 A	
	5 A – 0...10 A	
	10 A – 0...20 A	
	15 A – 0...30 A	
		25 A – 0...50 A
Rated insulation voltage	690 V	
Short-circuit current (overload capacity)	$I_{SC} = 30 \times I_n \dots$ for $I_n = 25$ A $I_{SC} = 50 \times I_n \dots$ for all others	$I_{SC} = 30 \times I_n \dots$ for $I_n = 15$ A $I_{SC} = 50 \times I_n \dots$ for all others
Power dissipation	max. 0.67 VA	
Connection - wiring	<i>Solid:</i> 2.5 mm ² ... 10 mm ² (AWG 13 ... 7) min. 4 mm ² ... for $I_n = 15$ A min. 6 mm ² ... for $I_n = 25$ A <i>Finely stranded or stranded:</i> 2.5 mm ² ... 6 mm ² (AWG 13 ... 9) min. 4 mm ² ... for $I_n = 15$ A min. 6 mm ² ... for $I_n = 25$ A	
Terminal clamp tightening torque	1.2 Nm	